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C.E. Faxon, del.

JUANULLOA SARGII, n. sp.



JUANULLOA SARGII, n. sp.

B. Meisel, Lith. Boston.

# BOTANICAL GAZETTE

JANUARY, 1893.

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## Undescribed plants from Guatemala. X.

JOHN DONNELL SMITH.

WITH PLATE I.

**Sloanea pentagona** (series AXILLIFLORÆ BRACHYSTACHYÆ Benth. Journ. Linn. Soc. v. Suppl. 62).—Ovary excepted glabrous: leaves coriaceous, nitid, entire, oblong ( $7-9 \times 2\frac{1}{4}-3^{\text{in}}$ ), acuminate, base obtusish, midrib and six to seven pairs of long-ascending nerves salient on both surfaces with distinct transverse veinlets, petioles short ( $3^1$ ): racemes subsessile, suppressed, few-flowered; pedicels incrassate, angular, ( $6-8^1$ ), exceeding ovoid alabastra: perianth 4-5-merous: sepals thick, ovate-lanceolate, colored within: petals shorter, lanceolate: stamens bi-seriate, lightly cohering at base, linear anthers thrice exceeding filament, connective mucronate: ovary velvety, pyramidal, concavely 5-angled, prolonged into short simple style, ovules in superposed pairs: developed flowers and fruit not seen.—A large tree with the habit of *Myrodia*, discovered by Baron von Türckheim on his estate at Pansamalá, Dept. Alta Verapaz, alt. 4,000<sup>ft</sup>, Jan. 1889, (ex Pl. Guatemal. qu. edid. J. D. S. 1,411).

**Xanthoxylum foliolosum** (§PTEROTA Endl.).—Scandent, armed with short recurved prickles, blotched with exudations, glabrous throughout: leaves 10-15-jugate, rachis narrowly margined and aculeate; leaflets opposite, subsessile, shortly oblong ( $6 \times 4^1$ ), apex round, base truncate and biglandular, coriaceous, veins obsolete above, crenatures glandular, the odd leaflet ovate-oblong and longer, the lower pairs roundish and smaller: panicles axillary and terminal, a third as long as leaves, axes divaricate: sepals triangular, petals thrice longer, gynophore very short, carpids one to two and punctate: cocculs one to two, nearly distinct, sessile, globose ( $2\frac{1}{2}^1$ ), subequalling pedicels, glandular-tuberculate, endocarp adnate, epidermis of globose seed fleshy.—X. *Pterota* HBK., nearest in habit and technical characters, is distinct by obovate and less numerous

leaflets, long-stipitate and single coccules, etc.—San Rafael, Dept. Zacatepequez, alt. 6,500<sup>ft</sup>, Febr. 1892, J. D. S., (ex Pl. cit. 1,319.)

**Ouratea podogyna** (series OOCARPÆ §A, Engl. Fl. Brasil. XII<sup>3</sup>. 302).—Leaves elongate-oblong ( $12 \times 3^m$ ), caudately acuminate, narrowed to short petiole ( $2-3^l$ ), obsoletely serrulate above middle, coriaceous, dull-green above, paler beneath; ascending nerves alone visible, impressed on upper surface, prominent on lower: slender panicle half as long as leaves, pedicels single or geminate and exceeding ovoid-lanceolate buds: sepals atrofuscescent, caducous in anthesis, ovate-oblong ( $3\frac{1}{4} \times 1\frac{1}{4}^l$ ), the three interior with scarious margins: petals obovate-oblong ( $4 \times 2^l$ ), exunguiculate: stamens equalling sepals, sessile, subulate-tetragonal, lightly rugulose: gynophore slender ( $\frac{3}{4}^l$ ), 5-angulate: ovary half as long and twice broader, carpids short-oval and laterally compressed, style equalling petals: drupe not seen.—A tree 15–18<sup>ft</sup> high, with leaves resembling in form and size those of *O. giganteophylla* Engl., but with flowers more nearly those of *O. olivæformis* Engl. *O. Guatemalensis* Engl., var. (?) Watson, differs by smaller and membranaceous leaves with close horizontal veins, nearly simple raceme, short and thick gynophore, etc., (no. 39, Watson's Fl. Guat.!)—Pansamalá forest, alt. 3,800<sup>ft</sup>, Sept. 1886, von Türckheim, (ex Pl. cit. 1,034).

POTENTILLA DONNELL-SMITHII, described by Dr. Focke in BOTAN. GAZ. XVI. 3, is now identified by him as *P. heterosepala* Fritsch, whose publication during the previous year in *Botan. Jahrb.* XI. 314 had been overlooked.—Collected also by Dr. W. C. Shannon, Ass't Surg. U. S. A., associate of the Intercontinental Railway Commission, at Chichoy, Dept. Chimaltenango, alt. 9,000<sup>ft</sup>, Mch. 1892, (ex Pl. cit. 368); and by Messrs. Heyde & Lux at Chiul, Dept. Quiché, alt. 8,000<sup>ft</sup>, Apr. 1892, (ex Pl. cit. 3,321).

*Fuchsia arborescens* Sims, var. (?) **megalantha**.—Lower leaves quaternate: flowers nearly twice larger than in type: the greater stamens exceeding sepals, the lesser equalling style, anthers large ( $1\frac{1}{2}^l$ ): stigma minute, ovary ellipsoid.—This is perhaps merely a strongly marked form of heterogonous dimorphism. The typical plant (perhaps only the more fertile form) was distributed as nos. 182 and 2,139 of this series.—Slopes of the Volcan de Acatenango, Dept. Zacatepequez, alt. 7,000<sup>ft</sup>, Mch. 1892, J. D. S., (ex Pl. cit. 2,469).

**Haويا Rodriguezii.**—Younger leaves, nerve-axils of the older, and ovaries, cano-pubescent; otherwise glabrate: leaves rhomboid-oval to elliptical ( $3\frac{1}{2}$ – $4\frac{3}{4} \times 2$ – $2\frac{3}{4}$  in), abruptly acuminate, obtusely or acutely angled at unequal base, eight to nine lateral nerves ascending straight to marginal arches: flowers large: lobes of calyx equalling tube ( $2\frac{1}{2}$ – $3$  in), prolonged to subulate tips: petals two-thirds as long, oval: awns of anthers filiform ( $2\frac{1}{2}$ ): style equalling petals, stigma globose ( $4$ ): capsule subsessile, large ( $2$ – $2\frac{1}{4}$  in), smooth, valves plane.—Compared at Kew by Mr. Hemsley with the originals of described species, and not identified. *H. elegans* Hemsl., as represented in this series of plants by nos. 2,527 and 2,528 determined by that gentleman, is a closely related species, differing chiefly by velvety or sericeous indument, round-oval leaves abruptly short-acuminate and with a rounded or subcordate base, relatively shorter calyx-lobes and longer petals and style.—A tree with a stout trunk, 30<sup>ft</sup> high.—Acatepeque, Dept. Zacatepequez, alt. 4,300<sup>ft</sup>, Mch. 1892, J. D. S., (ex Pl. cit. 2,529). Named for Sr. ldo. Don Juan J. Rodriguez, former Minister of the Interior, a distinguished student of *Lepidoptera*, in memory of hospitable and courteous attentions during my sojourn on his estates of Capetillo and Acatepeque situated on the southeastern slopes of the Volcan de Fuego.

**Haويا Heydeana.**—Arborescent (18<sup>ft</sup>), glabrous: leaves conterminously lanceolate ( $3\frac{1}{2}$ – $4\frac{1}{2} \times 1$ – $1\frac{1}{4}$  in), tipped with a gland, blotched with exudations: flowers small for the genus ( $2\frac{1}{2}$ – $2\frac{3}{4}$  in), peduncles twice to thrice longer than petioles (12–18): lobes of calyx shortly tipped, narrowly linear, exceeding tube: petals as long, twice broader, lanceolate: stigma ellipsoid: capsule about an inch long with narrow ( $2$ ) and plane valves.—A well marked species as respects both foliage and flowers, and especially distinct by the peduncle exceptional for the genus.—Beleú, Dept. Alta Verapaz, alt. 5,000<sup>ft</sup>, Apr. 1892, Heyde & Lux, (ex Pl. cit. 2,935).—Dedicated to Sr. pbro. Don Enrique Th. Heyde, parish priest in Santa Rosa, as a slight but very sincere acknowledgment of my obligations to him for an extensive series of plants with duplicates, collected by him and his nephew, Don Ernesto Lux, in the departments of Quiché, Santa Rosa and Jalapa. Important additions to our knowledge of the Guatemalan flora may be expected from the further explorations, proposed by these gentlemen, of regions unknown to botanists, difficult of access,



and inhabited by indigenous races unfriendly to all strangers save such as visit them under the auspices of the church.

**Parathesis micrantha.** (*Ardisia micrantha* Donnell Smith BOTAN. GAZ. XIV. 26; not of HBK.).—In transferring this species to what recently received material shows to be its correct genus, the specific name preoccupied in *Ardisia* may stand in *Parathesis*, and indicates a character, alike abnormal in both genera, of minute cordate anthers. The bractlets are also seen to be oblong and ciliate.—San Miguel Uspantán, Dept. Quiché, alt. 6,000<sup>ft</sup>, Apr. 1892, Heyde & Lux, (ex Pl. cit. 3,020).

**Bumelia pleistochasia.**—Leaves smooth and shining, coriaceous, elliptical ( $3-3\frac{1}{2} \times 1\frac{1}{4}-1\frac{1}{2}^{\text{in}}$ ), obtusely acuminate, base acutely contracted into petiole ( $4-5^1$ ): fascicles densely flowered, equalling petiole: calyx obconic, as long as pedicel, incrassate segments round-ovate: appendages of corolla lateral, obliquely lanceolate, denticulate; proper lobes twice longer, oval, subentire: staminodes half the size of lobes, oval, fimbriate; ovary glabrous.—San Lucas, Dept. Zacatepequez, alt. 5,500<sup>ft</sup>, Apr. 1890, J. D. S., (ex Pl. cit. 2,184), distributed as *B. persimilis* Hemsl.—Palmer's no. 1,123 Fl. Mex. has been referred more correctly to that species by Mr. J. N. Rose, assistant botanist to the U. S. National Herb. With somewhat similar leaves it differs from the above by pubescence, smaller fascicles of less congested pedicels, cylindrical half-smaller calyx, oblong sepals, elongate lobes of corolla, nearly as long lanceolate staminodes, pilose ovary, etc.

**Bumelia leiogyna.**—Arborescent and spinose like the preceding, glabrous except the younger parts: leaves membranaceous, veinage distinct, elliptical-oblong to lanceolate ( $2\frac{1}{2}-3 \times 1^{\text{in}}$ ), apex obtusish, tapering acutely to short petiole: flowers minute ( $2^1$ ), subequalling pedicels and petiole, 6-10-fasciculate: calyx ovoid, half as long as pedicel; segments ovate with scariose margins, the interior ones puberulent: lobes of corolla obovate, denticulate, patent; appendages minute, subulate from an oval and lacerate base: staminodes also minute, rhomboidal, fimbriate: ovary glabrous, style shortly subulate.—The descriptions of *B. ferox* Cham. et Schl. indicate the nearest affinity, but ascribe to it opaque smaller and more generally obovate leaves, spatulate-lanceolate staminodes; and the ovary may be presumed to be normal and therefore hirsute.—Capetillo, Dept. Zacatepequez, alt. 4,500<sup>ft</sup>, Mch. 1892, J. D. S., (ex Pl. cit. 1,451).

**Styrax conterminum.**—Indument leprous, nowhere stellate, scales lacerate, ferruginous on branchlets petioles and calyx: leaves elliptical-oblong ( $5-6 \times 1\frac{3}{4}-2^{\text{in}}$ ), conterminously acuminate, long-petiolate ( $9-11^{\text{in}}$ ), coriaceous, scales of upper surface sparse, of lower continuous and silvery sprinkled with red: racemes chiefly simple, twice exceeding petioles; flowers large ( $7^{\text{in}}$ ), pedicels as long and minutely bracteolate at base and middle: corolla silvery, thrice exceeding the minutely toothed calyx: filaments half-connate, twice longer than the short ( $2^{\text{in}}$ ) and oblong anthers, exbarbate within, their exterior beset with fimbriate scales.—The other three species of the lepidote group, all South American, can be distinguished by their leaves: in *S. ovatum* A. DC. ovate-lanceolate (838 Rusby Fl. S. Am.! 467 Bang Pl. Boliv.): in *S. cordatum* A. DC. cordate-ovate: in *S. leprosum* Hook. et Arn. obovate-oblong and small (II. 46 ex herb. Regnell.).—A small tree; San Miguel Uspantán, Dept. Quiché, alt. 6,000<sup>ft</sup>, Apr. 1892, Heyde & Lux, (ex Pl. cit. 2,915).

**Ehretia Luxiana.**—Branchlets and axes of inflorescence angulate, beset with linear red lenticels: leaves tuberculate at their axils, glabrous, oval with obtuse ends or elliptical with somewhat acuminate apex and more acute base ( $2\frac{1}{4}-4\frac{1}{4} \times 1\frac{1}{2}-2\frac{1}{4}^{\text{in}}$ ), serrate above middle: panicle terminal, shorter than leaves, corymbose, densely flowered, slightly pubescent: flowers among the smallest of the genus ( $3^{\text{in}}$ ): calyx a third as long, campanulate, broadly and obtusely lobed to middle: lobes of corolla exceeding tube, oblong, revolute.—Habit and inflorescence are those of *E. Mexicana* Watson (3,085 Pringle Fl. Mex.), which differs by hispid lanceolate leaves, and still smaller flowers with sharply partite calyx and shortly lobed corolla.—Arborescent ( $15^{\text{ft}}$ ). Called by the Indians “Pepi Nanci.”—San Miguel Uspantán, alt. 6,000<sup>ft</sup>, Apr. 1892, Heyde & Lux, (ex Pl. cit. 3,065).

**Juanulloa Sargii** (§ EUJUANULLOA Dun. in DC. Prodr.).—Leaves membranaceous, glabrate above, sprinkled beneath with stellate pubescence, obovate to rhomboidal or elliptical ( $5-7 \times 2-4^{\text{in}}$ ), apex rounded, base cuneate, petioles short ( $3^{\text{in}}$ ) and tomentose: peduncles axillary and terminal, elongated ( $3-5^{\text{in}}$ ), forking, coriaceous flowers racemose on dichotomous flexuose axes of panicle: calyx ochraceous-tomentose, red within, campanulate, contracted into short ( $3-4^{\text{in}}$ ) pedicel; partitions elliptical-oblong ( $10 \times 3\frac{1}{2}^{\text{in}}$ ), acute, two-thirds coher-

ing, in fruit separating: corolla more than twice longer, inflated above middle, aureate-pubescent, red within: anthers linear (6'), more than half as long as filament: berry globose-ovoid (10'), seeds oblong and foveolate.—A sarmentose shrub 4–5<sup>ft</sup> high, with foliage crowded toward ends of the short branchlets, scarred with verrucose articulations of fallen leaves and flowers.—Banks of a brook near Escuintla, Dept. Escuintla, alt. 1,100<sup>ft</sup>, Mch. 1892, J. D. S., (ex Pl. cit. 1,467).—The name proposed is that of my esteemed friend, Mr. Francis C. Sarg, consul of the German Empire for Guatemala, an accomplished naturalist, who has contributed valuable material to the entomological volumes of *Biologia Centrali-Americana*.

EXPLANATION OF PLATE I.—Fig. 1, flowering branch. Fig. 2, fruiting panicle. Fig. 3, flower exposed with corolla removed. Fig. 4, corolla laid open. Fig. 5, pistil. Fig. 6, fruit. Fig. 7, seed. (Figs. 1–4 are natural size; the others are variously magnified.)

**Tynanthus Guatemalensis.**—Undeveloped leaves, axes of inflorescence, and corolla, cano-furfuraceous: leaves nearly glabrous, twice exceeding common petiole, seldom cirrhose; leaflets more usually three, long-petiolulate (6–11'), elliptical ( $2\frac{1}{4}$ –3 × 1<sup>in</sup>), caudately acuminate, apex blunt, membranaceous, the terminal the greatest, with half-longer petiolule and an acute base, the lateral obliquely rounded at base: thyrsi terminal and geminate or becoming axillary, shorter than leaves, primary axes brachiate, of cymules rectangular-divaricate and capillary, bractlets minutely subulate: calyx campanulate, transversely truncate, teeth and nerves obsolete: corolla more than thrice longer (3–3 $\frac{1}{2}$ '), white, labiate to middle, furfuraceous lobes of reflexed anterior lip orbicular and unequal, elsewhere within glabrous: stamens and minute ( $\frac{3}{4}$ ') inappendiculate staminode equally inserted near base of tube, glabrous: ovary conic, cano-hirsute: capsule not seen.—According to Prof. Bureau's grouping of other species, all South American, this is to be collocated with *T. Goudotiana* Bur., which is distinguishable by an obliquely truncate calyx with a large posterior tooth.—Climbing over trees and flowering profusely.—Banks of Rio Ocosito, Dept. Quezaltenango, alt. 250<sup>ft</sup>, Apr. 1892, J. D. S., (ex Pl. cit. 1,488).

**Schlegelia cornuta.**—Epiphytal, procumbent, branches scabrid with setose tubercles and pilose: leaves obovate ( $2\frac{1}{2}$ –4 $\frac{1}{4}$  × 1 $\frac{3}{4}$ –2 $\frac{1}{2}$ '), apex rounded or retuse, tapering to short petiole,

thick-coriaceous, smooth and shining, margins revolute, nerves few and robust: peduncles axillary, short ( $3-6^l$ ), pilose; pedicels  $3-7$ -fasciculate, half or two-thirds as long as flowers: tube of calyx obpyramidate, pentagonal, lobes twice longer ( $4-5^l$ ) and subulate by conduplicately cohering margins: corolla evenly cylindrical ( $15-17 \times 2\frac{1}{2}^l$ ), throat scarcely ampliate, lobes subequal ( $2^l$ ): stamens included, twice exceeding staminode, insertion barbate, anthers reniform by diverging oval cells: disk none: berry depressed-globose ( $4 \times 5^l$ ), fleshy; seeds ten to twelve, scariose-alate, enveloped in fibrose pulp.—A pseudo-parasitic shrub, not repent.—San Miguel Uspantán, alt.  $8,000^t$ , Apr. 1892, Heyde & Lux, (ex Pl. cit. 3,044).

***Ægyphila falcata*.**—Branchlets tetragonal, thickened at nodes, smooth: petioles brachiate, canaliculate, short ( $6-9^l$ ); leaves chartaceous, nitid, faintly punctate, oval ( $7-9 \times 4-5^m$ ), the younger ovate-oblong, each end broadly rounded and abruptly short-acuminate, falcate, base conduplicate, midrib salient beneath, costal nerves robust: axillary cymes half-equalling leaves and long-pedunculate, the terminal thyrsoid and brachiate, nodes complanate, foliaceous bracts lanceolate, axes fastigiate, bractlets subulate: flowers 4-merous, sub-diclinous, dimorphous, puberulent, shortly pedicellate: calyx obpyramidate, mouth nearly truncate: corolla reddish-yellow, hypocraterimorphous, narrow tube one to four times as long as calyx, limb ampliate ( $2\frac{1}{2}^l$ ), stamens all more or less polleniferous, the semi-abortive included in short corolla, the others twice exceeding elongate corolla.—A symmetrical tree  $30-40^t$  high, with a habit other than that of *Æ. elata* Swz. by its foliage and abundantly axillary inflorescence, and with the dimorphous flowers of *Æ. arborescens* Vahl.—Escuintla, alt.  $1,100^t$ , Apr. 1890, J. D. S. (ex Pl. cit. 2,111), distributed as *Æ. elata* Swz.: San Felipe, Depart. Retalhuleu, alt  $2,000^t$ , Apr. 1892, J. D. S., (ex Pl. cit. 1,479).

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